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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,971	03/24/2005	Kazuhito Kawakami	62527 (49227)	3609
21874	7590	08/12/2005	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			BOYKIN, TERRESSA M	
			ART UNIT	PAPER NUMBER

1711

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/517,971	Applicant(s) KAWAKAMI ET AL.	
	Examiner Terressa M. Boykin	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-14 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Handwritten signature and date: 8-00

Priority

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4 - 14 are rejected under 35 U.S.C. 102(e) as being anticipated by USPub 20050031871 see abstract, pages 1-6, examples 1-2 and claims 16, 17 and 27.

The reference discloses a composite resin particle useful as an additive for paints or coatings, powder coatings, cosmetic additives, slush molding resins, spacer for electronic part assembly, standard particles for electric measurement devices, toner, hot melt adhesive as well as other molding materials. Said composite resin particle comprises a resin microparticle (A) depositing on the surface of a resin particle (B) wherein the shape factor (SF-1) of said composite resin particle is 115 to 800. It is also a composite resin particle comprising a resin microparticle (A) depositing on the surface

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of a resin particle (B) wherein the acid value of a resin (b) constituting the resin particle (B) is 5 to 100.

The composite resin particle is obtained by subjecting an aqueous dispersion to a high shear force upon dispersing if the resin (b) and/or the precursor (b0) is employed, and upon dispersing and if necessary upon removing the solvent if a solution of (b) and/or (b0) is employed. By means of subjecting to a high shear force, the (SF-1) of a composite resin particle readily becomes within the range specified in the first aspect of the invention, resulting in a resin particle whose powder flowability and viscosity profile when used as an additive are excellent.

The resin (a) may for example be either a thermoplastic resin or a thermosetting resin, including vinyl resins, polyurethanes, epoxy resins, polyesters, polyamides, polyimides, silicone resins, phenol resins, melamine resins, urea resin, aniline resins, ionomer resins, polycarbonates as well as mixtures thereof. Among those listed above, those preferred because of the readiness of obtaining a uniform microspheric resin microparticle are vinyl resins, polyurethanes, epoxy resins, polyesters and mixtures thereof, with vinyl resins, polyurethanes, polyesters and mixture thereof being more preferred and vinyl resins, polyesters and mixtures thereof being especially preferred.

The water soluble polymer (T) may for example be a cellulose (methyl cellulose, ethyl cellulose, hydroxyethyl cellulose, ethylhydroxyethyl cellulose, carboxymethyl cellulose, hydroxypropyl cellulose, as well as saponified products thereof, cationized cellulose and the like), gelatin, starch, dextrin, gum arabic, chitin, chitosan, polyvinyl alcohol, polyvinyl

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pyrrolidone, polyethylene glycol, polyethylene imine, polyacrylamide, acrylic acid (salt)-containing polymer (sodium polyacrylate, potassium polyacrylate, ammonium polyacrylate, polyacrylic acid neutralized partially with sodium hydroxide, sodium acrylate-acrylate copolymer), styrene-maleic anhydride copolymer neutralized (partially) with sodium hydroxide, water-soluble polyurethane (reaction product of polyethylene glycol, polycaprolactonediol and the like with polyisocyanate, and the like) and the like.

The reaction proceeds with a reaction terminator which may, for example, be a primary or secondary monoamine of 1 to 40 carbon atoms (diethylamine, dibutylamine, butylamine, laurylamine, monoethanolamine, diethanolamine and the like); a blocked monoamine of 3 to 40 carbon atoms (ketimine compound and the like); Among those listed above, an optionally blocked polyamine, optionally blocked polyol and water are preferred, with an optionally blocked polyamine and water being more preferred and a polyamine, ketimine compound and water being especially preferred, and those employed most preferably are 4,4'-diaminodiphenylmethane, xylylene diamine, isophorone diamine, ethylene diamine, diethylene triamine, triethylene tetramine and ketimine compounds obtained therefrom with ketones, as well as water.

The viscosity of the reactive group-containing prepolymer (α) at 100.degree. C. is preferably 50 to 50,000 MPaS. The upper limit of the viscosity is more preferably 5,000 MPaS, especially 3,000 MPaS, while the lower limit is more preferably 100 MPaS, especially 150 MPaS. Within this range, a composite resin particle having a sharp particle size distribution in a spindle shape can readily be obtained.

When being subjected to a high shear force, an aqueous dispersion in the shearing step has a viscosity at that temperature which is preferably 5 to 100,000 mPas, more preferably 10 to 60,000 mPa.s, especially 15 to 40,000 mPa.s. A viscosity of the aqueous dispersion within this range allows the time for deforming the shape of a resin particle under a high shear force to be reduced, and makes it difficult after the deformation to recover a spherical shape, resulting in a dispersion whose shape after the deformation is stable.

With regard to "adding a viscosity decreasing agent" note that any solvent or agent would inherently be a viscosity decreasing agent by shear volume expansion of the dispersion. The reference does state that the composite resin particle has a uniform particle diameter, and excellent powder flowability and storage stability. In addition, *it exhibits a marked thixotropy upon dispersing in a solvent or in an aqueous solvent, i.e. "decrease in viscosity under stress, followed by a gradual return when the stress is removed."* Accordingly it is *useful as a fluidity-improving agent* for a paint or a coating. The resin microparticle (A) comprises a resin (a).

The reference discloses a method for preparing a resin particle wherein shear force is applied to an aqueous dispersion. The addition of various viscosity enhancing agents such as a thickener is common practice in, for example, the paint industry and is considered of no patentable distinction without an unexpectant result or a particularly defined and unexpected thickener. The particle dispersion of the reference is said to exhibit excellent "thixotropy", thus the ability of the system to exhibit lower viscosities as a function of shearing and its ability to have its structure reformed over a period of time

after the shear is removed. Finally, as mentioned previously, the composite resin particle is useful as additives in paints or coatings, powder coatings, cosmetic additives, slush molding resins, spacer for electronic part assembly, electric measurement device standard particles, toner, hot melt adhesives as well as other molding materials.

Thus, in view of the above, there appears to be no significant difference between the reference and that, which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

- In claim 12 the recited "resin" is misspelled" as –rein-. Correction required.

Correspondence

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is (571-272-1700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb


Examiner Terressa Boykin
Primary Examiner
Art Unit 1711